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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,594	11/12/2003	Richard Hugh Clark	TS7594 (US)	7831
23632	7590	11/07/2005	EXAMINER	
SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463			COSTALES, SHRUTI S	
			ART UNIT	PAPER NUMBER
			1714	
DATE MAILED: 11/07/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,594

Applicant(s)

CLARK ET AL.

Examiner

Shruti S. Costales

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/12/03 & 12/5/03 4/30/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements submitted on November 12, 2003 and December 5, 2003 were filed in compliance with the provisions of 37 CFR § 1.97. Accordingly, said information disclosure statements filed by the applicant have been considered by the Examiner.
2. It is to be noted that the information disclosure statement filed by the applicant on April 30, 2004 has not been considered by the Examiner because said information disclosure statement filed fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. The applicant has not provided a copy of GB 2368594.

Further, with respect to the Search Report for GB 011910.8, a listing of references in a Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited

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pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Objections

3. Claims 6 and 7 are objected to because they recite the claim limitation "(degrees of crank angle)", wherein it is not clear to the Examiner why the claim limitation has been placed in parentheses and what the significance of the parentheses is. It is suggested that for clarity, the applicant delete the parentheses in claims 6 and 7.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6-11, 20, 22, 24, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

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subject matter which applicant regards as the invention. More particularly, claims 6, 7, 20, and 22 recite the claim limitation "measured using an AVL/LEF 5312 engine under operating condition as described in Tables 2 and 3", wherein it is not clear to one of ordinary skill in the art what specific information during the operation of the engine from Tables 2 and 3 are to be considered within the scope of the claims. Claims 8-11, 24, and 26 have been rejected under 35 U.S.C. 112, second paragraph, as being dependent from a rejected base claim.

As it is not possible for the Examiner to ascertain the scope of the presently cited claims, for the purposes of examination, the cited limitation has not been conferred any patentable weight.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/13028 to Exxon (cited on PTO-1449 submitted on November 12, 2003) in view of Aquazole by Barnaud et al. (cited on PTO-1449 submitted on December 5, 2003), and WO 01/83406 to Exxonmobil (cited on PTO-1449 submitted on November 12, 2003).

Exxon discloses emulsions including water, a Fischer-Tropsch derived hydrocarbon liquid, and a surfactant (Page 2). It is further disclosed that the emulsion significantly improves emission characteristics in regard to particulate emissions (Page 4), therein intrinsically implying the operation of an engine in order to obtain reduced emissions. A method of preparing the emulsion is disclosed on pages 9-10. Exxon's emulsion does not include an ignition improving additive. Further, it is to be noted that a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process

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steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The difference between Exxon and the presently cited claims is the requirement that (i) the emulsion is a water-in-fuel emulsion and emissions are reduced, and (ii) the cetane number is greater than 50.

With respect to the difference in (i), Aquazole, which is drawn to water in diesel fuel emulsion (Col. 1, Introduction), discloses that the emulsion reduces NOx, black smoke, and particulates (Cols. 1-2, Introduction; see also Cols. 9-10, Conclusions), wherein the water in oil emulsion includes diesel fuel, water, and a surfactant additive package (Col. 3, Product Characteristics). It would have been obvious to one of ordinary skill in the art to use Aquazole's water-in-oil emulsion in Exxon because the level of NOx, black smoke, and particulates is significantly reduced (Cols. 9-10, Conclusions) and the inverted phase of water-in-fuel enables heavier components of the Fischer-Tropsch hydrocarbon liquid to be used within the emulsion as opposed to an oil-in-water emulsion (Cols. 1-2, Introduction).

With respect to the difference in (ii), '406, which is drawn to fuel blends (Page 3), discloses cetane numbers of greater than 60 (Page 4), therein intrinsically implying that the ignition delay is smaller. It would have been obvious to one of ordinary skill in the art to use '406's high cetane numbers because the ignition delay will be smaller (Page 4) which is a desirable property in fuels improving engine operability, thereby obtaining the invention as set forth in the presently cited claims.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shruti S. Costales whose telephone number is (571) 272-8389. The examiner can normally be reached on Monday - Friday, 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

SSC
Shruti S. Costales
October 17, 2005

Vasu Jagannathan
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